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**TRANSMITTAL  
FORM**

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Total Number of Pages in This Submission

17

Application Number

10/674,745

Filing Date

September 30, 2003

First Named Inventor

Dennis M. Hilton

Art Unit

1711

Examiner Name

Zemel, Irina Sopjia

Attorney Docket Number

621P002c/pDiv.

**ENCLOSURES (Check all that apply)**

Fee Transmittal Form



Fee Attached



Amendment/Reply



After Final



Affidavits/declaration(s)



Extension of Time Request



Express Abandonment Request



Information Disclosure Statement



Certified Copy of Priority Document(s)

Reply to Missing Parts/  
Incomplete ApplicationReply to Missing Parts  
under 37 CFR 1.52 or 1.53

Drawing(s)



Licensing-related Papers



Petition

Petition to Convert to a  
Provisional Application

Power of Attorney, Revocation



Change of Correspondence Address



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CD, Number of CD(s) \_\_\_\_\_



Landscape Table on CD

Remarks



After Allowance Communication to TC

Appeal Communication to Board  
of Appeals and InterferencesAppeal Communication to TC  
(Appeal Notice, Brief, Reply Brief)

Proprietary Information



Status Letter

Other Enclosure(s) (please identify  
below):

-Letter of Transmittal (1-Page)

-Brief on Appeal (13-Pages)

**SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT**

Firm Name

Niels &amp; Lemack

Signature

Printed name

Kevin S. Lemack

Date

January 11, 2006

Reg. No.

32,579

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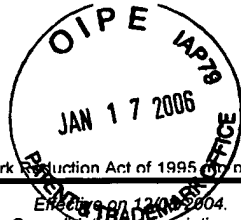
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Date

January 11, 2006

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# FEE TRANSMITTAL

## For FY 2005

☐ Applicant claims small entity status. See 37 CFR 1.27

TOTAL AMOUNT OF PAYMENT (\$) 500.00

### Complete if Known

Application Number	10/674,745
Filing Date	September 30, 2003
First Named Inventor	Dennis M. Hilton
Examiner Name	Zemel, Irina Sopjia
Art Unit	1711
Attorney Docket No.	621P002c/pDiv.

### METHOD OF PAYMENT (check all that apply)

☒ Check ☐ Credit Card ☐ Money Order ☐ None ☐ Other (please identify): \_\_\_\_\_

☒ Deposit Account Deposit Account Number: 14-0930 Deposit Account Name: Nields & Lemack

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### FEE CALCULATION

#### 1. BASIC FILING, SEARCH, AND EXAMINATION FEES

Application Type	FILING FEES		SEARCH FEES		EXAMINATION FEES		Fees Paid (\$)
	Fee (\$)	Small Entity Fee (\$)	Fee (\$)	Small Entity Fee (\$)	Fee (\$)	Small Entity Fee (\$)	
Utility	300	150	500	250	200	100	
Design	200	100	100	50	130	65	
Plant	200	100	300	150	160	80	
Reissue	300	150	500	250	600	300	
Provisional	200	100	0	0	0	0	

#### 2. EXCESS CLAIM FEES

Fee Description	Fee (\$)	Small Entity Fee (\$)
Each claim over 20 (including Reissues)	50	25
Each independent claim over 3 (including Reissues)	200	100
Multiple dependent claims	360	180

<u>Total Claims</u>	<u>Extra Claims</u>	<u>Fee (\$)</u>	<u>Fee Paid (\$)</u>	<u>Multiple Dependent Claims</u>
- 20 or HP =	x	=		<u>Fee (\$)</u> <u>Fee Paid (\$)</u>

HP = highest number of total claims paid for, if greater than 20.

<u>Indep. Claims</u>	<u>Extra Claims</u>	<u>Fee (\$)</u>	<u>Fee Paid (\$)</u>
- 3 or HP =	x	=	

HP = highest number of independent claims paid for, if greater than 3.

#### 3. APPLICATION SIZE FEE

If the specification and drawings exceed 100 sheets of paper (excluding electronically filed sequence or computer listings under 37 CFR 1.52(e)), the application size fee due is \$250 (\$125 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(s).

<u>Total Sheets</u>	<u>Extra Sheets</u>	<u>Number of each additional 50 or fraction thereof</u>	<u>Fee (\$)</u>	<u>Fee Paid (\$)</u>
- 100 =	/ 50 =	(round up to a whole number) x	=	

#### 4. OTHER FEE(S)

Non-English Specification, \$130 fee (no small entity discount)

Other (e.g., late filing surcharge): Brief on Appeal Filing Fee

Fees Paid (\$)

\$500.00

#### SUBMITTED BY

Signature		Registration No. (Attorney/Agent)	32,579	Telephone	508-898-1818
Name (Print/Type)	Kevin S. Lemack	Date	January 11, 2006		

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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE  
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

Appellants : Dennis M. Hilton et al.  
Serial No. : 10/674,745  
Filed : September 30, 2003  
For : FOAMED FIREPROOFING COMPOSITION AND METHOD  
Examiner : Zemel, Irina Sopjia  
Art Unit : 1711  
Attorney  
Docket No. : 621P002c/pDiv.  
Confirmation  
No. : 4209  
Customer No. : 42754

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Sir: LETTER OF TRANSMITTAL


There is filed herewith Appellant's Brief on Appeal in the above-identified case.

The due date of Appellant's Brief is two months from the date of receipt (October 11, 2005) by the PTO of Appellant's Notice of Appeal: namely, December 11, 2005. This due date is now extended by one month so as to expire January 11, 2006 by virtue of the petition for extension of time filed with the Amendment After Final on January 10, 2006, together with the applicable extension fee.


A check in the amount of \$500.00 in payment of the Brief on Appeal fee is enclosed herewith.

The Commissioner is hereby authorized to charge payment of any additional fees associated with this communication or credit any overpayment to Deposit Account No. 14-0930.

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Signature: Kevin S. Lemack  
Date: January 11, 2006

Respectfully submitted,

  
Kevin S. Lemack  
Attorney for Applicants  
Registration No. 32,579  
Niels & Lemack  
176 E. Main Street  
Westboro, MA 01581  
TEL: (508) 898-1818




IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

Appellants : Dennis M. Hilton et al.  
Serial No. : 10/674,745  
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Attorney  
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Confirmation  
No. : 4209  
Customer No. : 42754  
Appeal No. :

**-BRIEF ON APPEAL-**

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Date: January 11, 2006

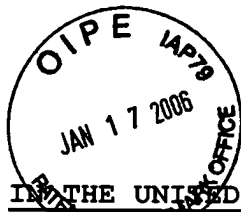
Respectfully submitted,

  
Kevin S. Lemack  
Attorney for Applicants  
Registration No. 32,579  
Nields & Lemack  
176 E. Main Street  
Westboro, MA 01581  
TEL: (508) 898-1818



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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE  
BOARD OF PATENT APPEALS AND INTERFERENCES

Applicant : Dennis M. Hilton, et al.  
Serial No. : 10/674,745  
Filed : September 30, 2003  
For : FOAMED FIREPROOFING COMPOSITION AND METHOD  
Examiner : Zemel, Irina Sopjia  
Art Unit : 1711

Confirmation  
No. : 4209  
Customer No. : 42754

Attorney  
Docket No. : 621P002c/pDiv.

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on January 11, 2006 (Date)

Kevin S. Lemack  
Name of applicant, assignee, or Registered  
Representative

[Signature]  
Signature  
January 11, 2006  
Date

Sir:

**APPEAL BRIEF**

The Appellants hereby submit this brief in support of the  
Appellants' appeal from the decision of the Examiner dated July  
8, 2005 rejecting claims 1-14.

A check in the amount of \$500.00 for the fee for filing a  
brief in support of an appeal pursuant to 37 C.F.R. §1.17(f) is  
enclosed.

**I. REAL PARTY IN INTEREST**

The real party in interest is W.R. Grace & Co.-Conn., the  
assignee of record.

## **II. RELATED APPEALS AND INTERFERENCES**

To the best of the Appellants' knowledge, the following applications are under appeal and no other appeals or interferences are pending and are related to this appeal: Serial Nos. 10/657,494; 10/306,594 and 10/044,407. There are no related interferences that will directly affect or be directly affected by or have a bearing on the Board's decision in this pending appeal.

## **III. STATUS OF CLAIMS**

Claims 1-14 are pending in the subject application.

Claims 1-14 stand rejected.

## **IV. STATUS OF AMENDMENTS**

An amendment to claim 13 was filed on January 10, 2006, subsequent to the final rejection of July 8, 2005.

## **V. SUMMARY OF CLAIMED SUBJECT MATTER**

Independent claim 1 relates to a dry mixture for forming a fireproofing composition (page 5, line 15) adapted to be spray applied to a steel substrate (page 5, lines 15-21). The dry mixture includes a hydraulic binder, a substrate adherence and coherence agent in an amount effective for enhancing adherence and coherence to the steel substrate (page 6, lines 1-2), and a set retarder (page 13, lines 2-6). The dry mixture provides a

pumpable slurry upon the addition of water (page 16, lines 4-5), capable of spray application to a steel substrate and which, after spray application, is adherent to the steel substrate (page 5, lines 1-4 from the bottom).

## **VI. GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL**

Whether claims 5-10 are indefinite under 35 U.S.C. §112, second paragraph.

Whether claims 1, 2, 5-10, 12 and 14 are unpatentable under 35 U.S.C. §103(a) over any one of Ayambem et al., U.S. 2003/0105204, U.S. 2002/0038618, U.S. Patent no. 6,645,291 or U.S. Patent No. 6,436,185.

Whether claims 3 and 4 are unpatentable under 35 U.S.C. §103(a) over any one of Ayambem et al., U.S. 2003/0105204, U.S. 2002/0038618, U.S. Patent No. 6,645,291 or U.S. Patent No. 6,436,185 in combination with Applicants' purported admission on the record.

Whether claim 11 is unpatentable under 35 U.S.C. §103(a) over any of the aforementioned Ayambem et al. references in combination with von Bonin, U.S. Patent No. 5,374,448.

## **VII. ARGUMENT**

### **1. Claims 5-10 are not indefinite.**

The Examiner states that claims 5-10 claim the amount of adherence and coherence agent in reference to the amount of



water, which is not part of the claimed mixture, and thus are indefinite.

Appellant respectfully disagrees.

The effective amount of the adherence and coherence agent is added to the dry mixture based upon the knowledge that water will eventually be added to create the slurry. That the water does not form part of the claimed dry mixture does not render indefinite the amount of the agent, since those skilled in the art can readily determine the amount of water necessary to form the slurry. That is, the amount of the agent is based upon a predetermined amount of water to be added to the dry mixture at a later point. In addition, it is noted that Table 1 on page 20 of the specification provides six different formulations with the amount of water set forth.

**2. Claims 1-2, 5-10 and 14 are not obvious over any one of the Ayambem et al. references**

To establish a *prima facie* case of obviousness, the prior art must teach or suggest all the limitations of a claim, there must exist a suggestion or motivation in the references themselves or as a matter of general knowledge to modify the references, and there must be a reasonable expectation of success. *In re Vaeck*, 947 F.2d 488, 20 U.S.P.Q.2d 1438 (Fed. Cir. 1991). However, the Examiner may not establish obviousness using hindsight or in view of the teachings or suggestions of the Appellants. *Para-Ordnance Manufacturing*,

*Inc. v. SGS Importers International, Inc.*, 73 F.3d 1085, 37 U.S.P.Q.2d 1237 (Fed. Cir. 1995). "To draw on hindsight knowledge of the...invention, when the prior art does not contain or suggest that knowledge, is to use the invention as a template for its own reconstruction--an illogical and inappropriate process by which to determine patentability." *Sensonics, Inc. v. Aerosonic Corp.*, 81 F.3d 1566, 38 U.S.P.Q.2d 1551 (Fed. Cir. 1996). All limitations of a claim must be taught or suggested by the cited references to establish prima facie obviousness. *In re Royka*, 490 F.2d 981, 180 U.S.P.Q. 580 (C.C.P.A. 1974).

The Examiner's position is that each of the cited references discloses dry compositions containing a hydraulic binder, a substrate adherence and coherence agent such as PVA, and set retarder, and that the adherence and coherence property is inherent in the prior art.

Appellants respectfully disagree, for the following reasons.

The two Ayambem et al. publications are the respective publications of the two Ayambem et al. patents cited by the Examiner, and therefore are merely cumulative. Moreover, the two Ayambem et al. patents are related as continuations, so they are also cumulative of each other. Accordingly, the following discussion will focus on Ayambem et al., U.S. Patent No.

6,436,185, but applies to each of the cited Ayambem references as well.

Ayambem et al. disclose a joint compound for use in filling and coating joints between adjacent gypsum wallboard sheets. More specifically, the objective of the invention of Ayambem et al. is developing a hybrid drying-type/setting-type joint compound. To that end, the joint compound necessarily includes water, calcium carbonate, optionally calcium sulfate hemihydrate, and a water-soluble set retarder. Indeed, the amount of water used is from about 20 wt.% to about 37 wt.% based on total weight of the compound.

PVA is disclosed as a binder to improve bonding to the substrate such as wallboard. However, Ayambem et al. do not disclose or suggest a dry mixture; the joint compound of Ayambem et al. necessarily contains water. Moreover, there is no indication that the joint compound is pumpable upon the addition of water, or that upon the application of mechanical turbulence, forms a settable foam capable of spray application, as required by the instant claims. Indeed, typical application methods disclosed for joint compounds are with a knife, blade or trowel.

In addition, the instant claims require that the foam stabilizing agent is present in the dry mixture in an amount effective for stabilizing the foam. Ayambem et al. do not disclose or suggest using a foam stabilizing agent, or using a foam stabilizing agent in an amount effective for stabilizing

foam as now claimed. Indeed, foaming is nowhere contemplated by Ayambem et al. That polyvinyl alcohol is disclosed in Ayambem et al. as a binder is insufficient to render obvious its use in an amount effective for stabilizing foam, particularly where Ayambem et al. nowhere contemplates foaming the joint compound. Equally compelling is the teaching in Ayambem et al. of the optional addition of a defoaming agent (see column 9, lines 19-25). This teaches away from the instant invention as claimed.

**2a. Claims 5-10 are separately patentable**

Claims 5-10 recite specific "effective amounts" of the substrate adherence and coherence agent. These amounts are from about 1% to 12% based on the mass of water added to the dry mixture to form the pumpable slurry (claims 5-7) and from about 2% to 3% by mass of water added to the dry mixture to form the pumpable slurry (claims 8-10). In contrast, the polyvinyl alcohol binder of Ayambem et al. is used in an amount of about 0.1 wt% to about 0.4 wt % based on the total weight of joint compound. This is substantially less than an amount effective for adherence and coherence as required by the instant claims, and no motivation is present to raise the amount to fall within the claimed ranges.

3. Claims 3 and 4 are not obvious over any one of the Ayambem et al. references in combination with Applicants' own admission.

Claims 3 and 4 are believed to be patentable by virtue of its dependence, for the reasons discussed above with respect to claim 1. In addition, the Examiner's position that Applicants' statement that those skilled in the art can readily determine which commercially available polyvinyl alcohol powders are suitable is an implication that the claimed PVA powders are well known and choosing it would have been obvious is incorrect. The determination by those skilled in the art referred to by Applicant is only after the skilled artisan has read and understood the teachings of the instant specification.

4. Claim 11 is not obvious over any one of the Ayambem et al. references in combination with von Bonin.

Claim 11 is believed to be allowable by virtue of its dependence, for the reasons set forth above.

**CONCLUSION**

For the reasons set forth above, the Appellant requests that the Examiner's rejections of claims 1-14 be reversed and that all pending claims be allowed.

Respectfully submitted,



Kevin S. Lemack

Reg. No. 32,579

Nields & Lemack

176 East Main Street, Suite 7

Westborough, MA 01581

Attorney for Appellant

TEL: (508) 898-1818

## APPENDIX

### CLAIMS ON APPEAL

1. A dry mixture for forming a fireproofing composition adapted to be spray applied to a steel substrate, said dry mixture comprising a hydraulic binder, a substrate adherence and coherence agent in an amount effective for enhancing the adherence and coherence to said steel substrate, and a set retarder, said dry mixture providing, upon the addition of water, a pumpable slurry capable of spray application to a steel substrate and which, after spray application is adherent to said substrate.

2. The dry mixture of claim 1, wherein said substrate adherence and coherence agent is powdered polyvinyl alcohol.

3. The dry mixture of claim 1, wherein said polyvinyl alcohol is in powdered form.

4. The dry mixture of claim 1, wherein the average particle size of said powder range from 80 to 400 microns.

5. The dry mixture of claim 1, wherein said effective amount of said substrate adherence and coherence agent is from about 1% to 12% by mass of water added to said dry mixture to form said pumpable slurry.

6. The dry mixture of claim 2, wherein said effective amount of said substrate adherence and coherence agent is from about 1% to 12% by mass of water added to said dry mixture to form said pumpable slurry.

7. The dry mixture of claim 3, wherein said effective amount of said substrate adherence and coherence agent is from about 1% to 12% by mass of water added to said dry mixture to form said pumpable slurry.

8. The dry mixture of claim 1, wherein said effective amount of said substrate adherence and coherence agent is from about 2% to 3% by mass of water added to said dry mixture to form said pumpable slurry.

9. The dry mixture of claim 2, wherein said effective amount of said substrate adherence and coherence agent is from about 2% to 3% by mass of water added to said dry mixture to form said pumpable slurry.

10. The dry mixture of claim 3, wherein said effective amount of said substrate adherence and coherence agent is from about 2% to 3% by mass of water added to said dry mixture to form said pumpable slurry.

11. The dry mixture of claim 1, wherein said hydraulic binder is stucco.

12. The dry mixture of claim 1, wherein said dry mixture further comprises calcium carbonate.

13. The dry mixture of claim 1, wherein said dry mixture further comprises alpha-olefin sulfonate.

14. The dry mixture of claim 1, wherein said dry mixture further comprises glass fibers and cellulosic fibers.